Applicant: Scr. 1acKay Ser. No.: 09/226 Atty. Docket: 594-25572-US Title: "Dynamic Water Velocity Correction" Page 1 of 6

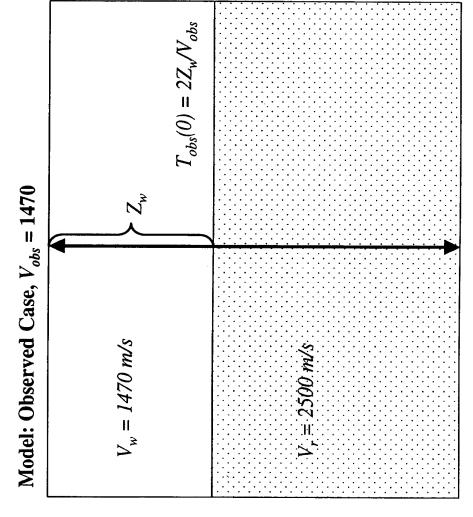


Figure 1



Applicant: Scott Hackay Ser. No.: 09/9 6 Atty. Docket: 594-25572-US Title: "Dynamic Water Velocity Correction" Page 2 of 6

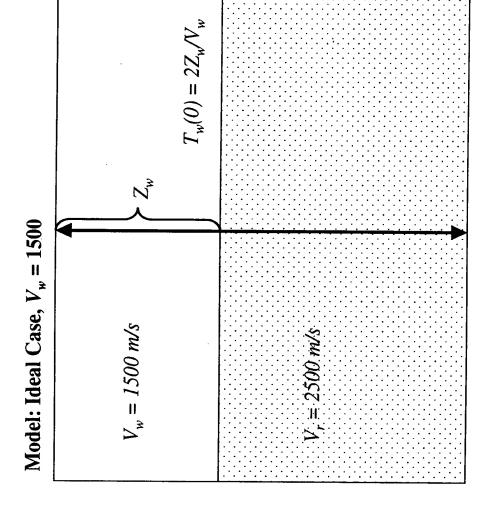


Figure 2



Applicant: ScandacKay
Ser. No.: 09/s 26
Atty. Docket: 594-25572-US
Title: "Dynamic Water Velocity Correction"
Page 3 of 6

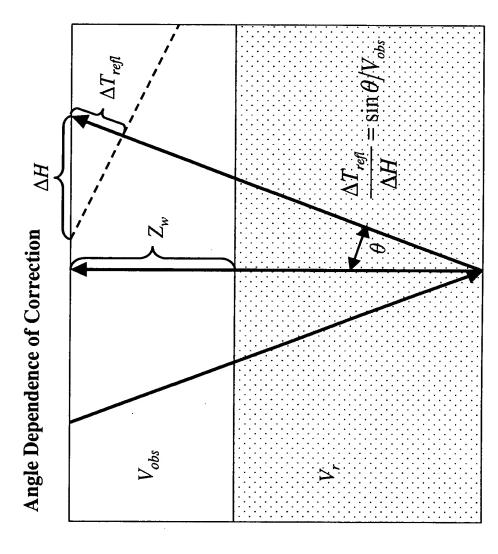
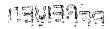
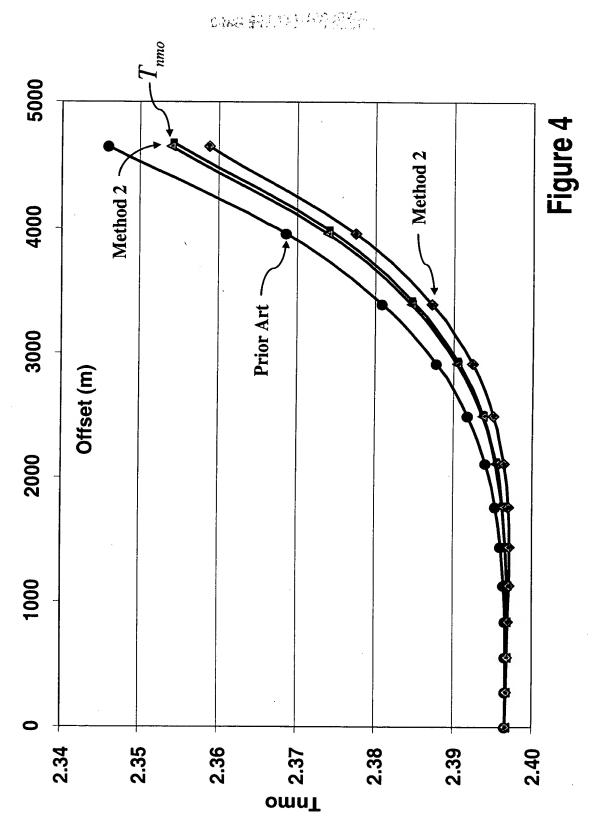


Figure 3



Applicant: Scott Mackay
Ser. No.: 09/2 26
Atty. Docket: 594-25572-US
Title: "Dynamic Water Velocity Correction"
Page 4 of 6







Applicant: MacKay
Ser. No.: 1,226
Atty. Docket: 594-25572-US
Title: "Dynamic Water Velocity Correction"
Page 5 of 6

THE RESERVE

Determine target water bottom time and time 101 shifts separately via analysis of seismic data: **Obtain Tw (target water bottom)** Obtain Δt (time shift) at data control points Combine Δt and Tw to get Vobs relative to Vw (ideal) 102 **Determine Observed Velocity** $Vobs = Vw(\Delta t/Tobs + 1)$ Determine Vertical Time Correction $\Delta t(\theta)$ 103 Which may be angle dependent Example: $\Delta t(\theta) = \Delta t(\theta = 0)/\cos \theta$ $=\Delta t(\theta = 0) / \{1-[(H Vobs)/(Trefl(H)Vrms^2)]^2\}^{1/2}$ 104 **Apply Vertical Time Correction Before Normal Move-out Correction**

Figure 5



Applicant: 1,226
Ser. No.: 1,226
Atty. Docket: 594-25572-US
Title: "Dynamic Water Velocity Correction"
Page 6 of 6

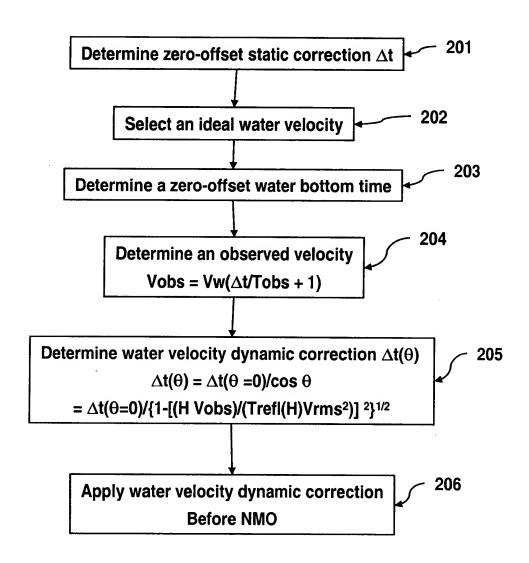


Figure 6